

**REMARKS**

Claims 1-5, all the claims pending in the application, are rejected. Claims 1-5 are cancelled. New claims 6-24 are added.

Support for Amendments

New claim 6 is based on wording from original claims 1 to 4.

New claim 7 is based on page 8, lines 22 to 28 of the original PCT description.

New claim 8 is based on Figure 1 and page 6, lines 5 to 7 of the description.

New claims 9 and 10 are based on Figure 1.

New claim 11 is based on page 5, lines 15 to 17.

New claim 12 is based on page 4, lines 19 to 20.

New claim 13 is based on wording from original claim 2.

New claim 14 is based on wording from original claim 3.

New claim 15 is based on wording from original claim 5.

New claim 16 is based on wording from original claims 1 and 4.

New dependent apparatus claims 17 to 24 correspond to new dependent method claims 7 to 11 and 13 to 15, respectively.

*Specification*

The abstract of the disclosure is objected to because applicant has used the abstract from the corresponding PCT application. The Examiner requires Applicant to draft a new abstract on a single sheet in a single paragraph following the claims which includes only the information pertaining to the abstract of the invention.

Appropriate correction has been made.

The disclosure is objected to because on Page 4, line 1, the abbreviation "HRD" has not been defined. The Examiner suggests that Applicant should insert --heat recovery device (HRD)-- to obviate the objection. Also on Page 4, line 16, the Examiner requires Applicant to insert the heading --Brief Description of the Drawings--.

Appropriate correction has been made.

***Claim Rejections - 35 U.S.C. § 102***

**Claims 1-5 are rejected under 35 U.S.C. 102(b) as being anticipated by Brown et al., (US Patent 5,527,449).** This rejection is traversed for at least the following reasons.

First, the rejection is moot in view of the cancellation of the claims.

**New Claim 6**

Second, claim 6 has been drafted to specify that thermally cracked material is injected back into the still pot beneath the surface level of liquor in the still pot.

**Brown et al**

The Examiner asserts that Brown et al. teach all of the features set forth in original claims 1-5. However, Applicants could not find any disclosure of this feature in Brown et al.

Rejected original claim 3 also refers to “injecting gas back into the still pot beneath the surface level of the liquid in the still pot”; but Applicants respectfully note that the Examiner’s rejection of original claim 3 does not make mention of this feature. Moreover, the Examiner does not include any indication as to where the Examiner considers this feature to be disclosed in Brown et al.

Finally, Applicants respectfully submit that the Examiner is mistaken to suggest (by his rejection of existing claim 3) that the technique described in the Brown reference includes injecting material back into a still pot beneath the surface level of the liquor in the still pot.

In the absence of a detailed explanation by the Examiner, Applicants assume that the Examiner is taking the view that the primary pool 13 of Brown corresponds to the still pot of the claims of the present application. However, Applicants’ understanding of Brown et al is that the burner 25 functions to directly heat the oil/fat in the primary pool 13 to a cracking temperature. There is NO disclosure of extracting fat/oil from the primary pool 13 and heating it in a separate thermal cracking unit before injecting it back into the pool 13. With direct heating, there can be no injection back.

The second distillation column designated as 59 in Figure 1 of Brown et al is used to further process products from the first distillation column designated by 35 in Figure 1.

However, there is no return of products from the 2<sup>nd</sup> distillation column of Brown to the primary pool 13 of Brown.

In the absence of these fundamental features, there can be no anticipation.

**Claims 7-15**

These dependent claims would be patentable at least for reasons given for parent claim 6. Moreover, claim 7 and those claims depending therefrom provide for a second path for higher velocity flow, that is not found in Brown et al.

**Claim 16**

This independent apparatus claim would be patentable for the same reasons given for independent claim 6. In particular, the claim expressly requires a “first path for passing a volume of material from the still pot through said heating unit for heating to a cracking temperature and injecting it back into the still pot beneath the surface of liquor in the still pot.”

**Claims 17-24**

These dependent claims would be patentable at least for reasons given for parent claim 16. Moreover, claim 17 and those claims depending therefrom provide for a second path for higher velocity flow, that is not found in Brown et al.

**Claims 1-5 are rejected under 35 U.S.C. 102(b) as being anticipated by Wansbrough et al. (US Patent 5,885,444).** This rejection is traversed for at least the following reasons.

First, the rejection is moot in view of the cancellation of the rejected claims.

**New Claim 6**

Second, as already noted, claim 6 has been drafted to specify that thermally cracked material is injected back into the still pot beneath the surface level of liquor in the still pot.

**Wansbrough et al**

The Examiner asserts that Wansbrough et al. teaches all of the features set forth in original claims 1-5. However, Applicants could not find any disclosure of this feature in Wansbrough et al.

The Examiner refers to Fig. 1 and asserts that Wansbrough et al teaches that “used feedstock oil is preheated by heat exchangers to a temperature of 500°F prior to entering the thermal cracking unit which is a still pot (11).” Given the Examiner’s assumption that the cracking vessel corresponds to the claimed still pot, the claim requires extracting a volume from the still pot for heating at an external location to a cracking temperature before injecting back into the still pot beneath the surface of the still pot.

There is no extraction from the cracking vessel 11 in Wansbrough for cracking at an external location and subsequent return to the cracking vessel 11 “beneath the surface of the still pot.” First, the only teaching that anything is injected back into the cracking vessel appears at col. 3, lines 1-13, where a portion of the waste oil is extracted from the vessel 11 and circulated to a heat recovery unit that heats the extracted oil and produces a mixed vapor/liquid that is returned to the vessel to maintain a proper temperature. However, as is clear from Fig. 1, there is no return below the surface of the liquor, as claimed. The only input is from thermal oxidizer 30, above the surface.

Given the difference in processing, there can be no anticipation.

### **Claims 7-15**

These dependent claims would be patentable at least for reasons given for parent claim 6. Moreover, claim 7 and those claims depending therefrom provide for a second path for higher velocity flow, that is not found in Wansbrough et al.

### **Claim 16**

This independent apparatus claim would be patentable for the same reasons given for independent claim 6. In particular, the claim expressly requires a “first path for passing a volume of material from the still pot through said heating unit for heating to a cracking temperature and injecting it back into the still pot beneath the surface of liquor in the still pot.”

### **Claims 17-24**

These dependent claims would be patentable at least for reasons given for parent claim 16. Moreover, claim 17 and those claims depending therefrom provide for a second path for higher velocity flow, that is not found in Wansbrough et al.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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